

[4910-13-U]

## DEPARTMENT OF TRANSPORTATION

### Federal Aviation Administration

14 CFR Part 39 [66 FR 8507 2/1/2001]

[Docket No. 2000-SW-61-AD; Amendment 39-12095; AD 2000-23-52]

RIN 2120-AA64

### Airworthiness Directives; Sikorsky Aircraft Corporation Model S-76A, S-76B, and S-76C Helicopters

**AGENCY:** Federal Aviation Administration, DOT.

**ACTION:** Final rule; request for comments.

**SUMMARY:** This document publishes in the **Federal Register** an amendment adopting superseding Airworthiness Directive (AD) 2000-23-52, which was sent previously to all known U.S. owners and operators of Sikorsky Aircraft Corporation (Sikorsky) Model S-76A, S-76B, and S-76C helicopters by individual letters. This AD requires, before further flight, performing a fluorescent penetrant inspection of the main rotor shaft assembly (shaft). Also required are recurring fluorescent penetrant inspections and visual inspections for any crack. If any crack is found, the shaft must be replaced with an airworthy shaft before further flight. This amendment is prompted by the discovery of two in-service cracked shafts, one with 477 hours time-in-service (TIS) and one with 313 hours TIS. A third shaft, that had been rejected from the manufacturing process for other reasons, was also discovered to have a crack. The actions specified by this AD are intended to prevent failure of the shaft and subsequent loss of control of the helicopter.

**DATES:** Effective February 16, 2001, to all persons except those persons to whom it was made immediately effective by Emergency AD 2000-23-52, issued on November 9, 2000, which contained the requirements of this amendment.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of February 16, 2001.

Comments for inclusion in the Rules Docket must be received on or before April 2, 2001.

**ADDRESSES:** Submit comments in triplicate to the Federal Aviation Administration (FAA), Office of the Regional Counsel, Southwest Region, Attention: Rules Docket No. 2000-SW-61-AD, 2601 Meacham Blvd., Room 663, Fort Worth, Texas 76137. You may also send comments electronically to the Rules Docket at the following address: 9-asw-adcomments@faa.gov.

The applicable service information may be obtained from Sikorsky Aircraft Corporation, Attn: Manager, Commercial Tech Support, 6900 Main Street, Stratford, Connecticut 06614, phone (203) 386-7860, fax (203) 386-4703. This information may be examined at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

**FOR FURTHER INFORMATION CONTACT:** Wayne Gaulzetti, Aviation Safety Engineer, Boston Aircraft Certification Office, 12 New England Executive Park, Burlington, MA 01803, telephone (781) 238-7156, fax (781) 238-7199.

**SUPPLEMENTARY INFORMATION:** On November 3, 2000, the FAA issued AD 2000-23-51, which required a one-time fluorescent penetrant inspection of the shaft. That AD was prompted by the discovery of a cracked shaft having 477 hours TIS. Since the issuance of that AD, additional incidents of cracked shafts occurred, and we determined that additional inspections are required. On November 9, 2000, we issued superseding Emergency AD 2000-23-52, for Sikorsky Model S-76A, S-76B, and S-76C helicopters, which requires an initial and recurring fluorescent penetrant inspections of the shaft. Also required, before the first flight of each day, are visual inspections for any crack. If any crack is found, the shaft must be replaced before further flight with an airworthy shaft.

The FAA has reviewed Sikorsky Aircraft Corporation Alert Service Bulletin No. 76-66-31, Revision B, dated November 7, 2000, which describes procedures for inspecting the shaft, part number 76351-09030 series and 76351-09630 series. In addition to requiring the inspections prescribed in this alert service bulletin, the FAA has determined that certain shafts, part number 76351-09030 series, serial numbers with a prefix of "B" and numbers 015-00700 through 00706, must be removed from service because the three cracked shafts discovered thus far came from that manufacturing lot.

Since the unsafe condition described is likely to exist or develop on other Sikorsky Model S-76A, S-76B, and S-76C helicopters of the same type designs, the FAA issued superseding Emergency AD 2000-23-52 to prevent failure of the shaft and subsequent loss of control of the helicopter. The AD requires, before further flight, performing a fluorescent penetrant inspection of the shaft in the area above the upper shaft output seal and below the lower hub attachment flange. Thereafter, recurring fluorescent penetrant inspections are required at specified time intervals and visual inspections using a 10x or higher magnifying glass are required before the first flight of each day. If any crack is found, the shaft must be replaced before further flight with an airworthy shaft that has been inspected in accordance with the requirements of this AD. The actions must be accomplished in accordance with the alert service bulletin described previously. The short compliance time involved is required because the previously described critical unsafe condition can adversely affect the structural integrity and controllability of the helicopter. Therefore, the actions stated previously are required before further flight and at the specified time intervals, and this AD must be issued immediately.

Since it was found that immediate corrective action was required, notice and opportunity for prior public comment thereon were impracticable and contrary to the public interest, and good cause existed to make the AD effective immediately by individual letters issued on November 9, 2000, to all known U.S. owners and operators of Sikorsky Model S-76A, S-76B, and S-76C helicopters. These conditions still exist, and the AD is hereby published in the **Federal Register** as an amendment to 14 CFR 39.13 to make it effective to all persons. However, there was an error in the preamble section of the emergency AD; the superseded AD number is 2000-23-51, the emergency AD incorrectly referenced AD 2000-53-21. The correction to the superseded AD number is made in this AD; the FAA has determined that this change will neither increase the economic burden on an operator nor increase the scope of the AD.

The FAA estimates that 172 helicopters of U.S. registry will be affected by this AD, that it will take approximately 4 work hours per helicopter to accomplish the fluorescent inspection, ½ work hour per helicopter to perform each visual inspection, and 8 work hours per helicopter to replace the shaft, if necessary, and that the average labor rate is \$60 per work hour. Required parts, if a shaft needs to be replaced, will cost approximately \$25,000 per helicopter. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$2,913,680 per year (assuming \$41,280 for the initial fluorescent inspections; \$206,400 for 5 repetitive inspections on each helicopter; \$516,000 for 100 visual inspections on each helicopter; and \$2,150,000 to replace the shaft on half of the fleet).

## **Comments Invited**

Although this action is in the form of a final rule that involves requirements affecting flight safety and, thus, was not preceded by notice and an opportunity for public comment, comments are invited on this rule. Interested persons are invited to comment on this rule by submitting such written data, views, or arguments as they may desire. Communications should identify the Rules Docket number and be submitted in triplicate to the address specified under the caption "ADDRESSES." All communications received on or before the closing date for comments will be considered, and this rule may be amended in light of the comments received. Factual information that supports the commenter's ideas and suggestions is extremely helpful in evaluating the effectiveness of the AD action and determining whether additional rulemaking action would be needed.

Comments are specifically invited on the overall regulatory, economic, environmental, and energy aspects of the rule that might suggest a need to modify the rule. All comments submitted will be available, both before and after the closing date for comments, in the Rules Docket for examination by interested persons. A report that summarizes each FAA-public contact concerned with the substance of this AD will be filed in the Rules Docket.

Commenters wishing the FAA to acknowledge receipt of their mailed comments submitted in response to this rule must submit a self-addressed, stamped postcard on which the following statement is made: "Comments to Docket No. 2000-SW-61-AD." The postcard will be date stamped and returned to the commenter.

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

The FAA has determined that this regulation is an emergency regulation that must be issued immediately to correct an unsafe condition in aircraft, and that it is not a "significant regulatory action" under Executive Order 12866. It has been determined further that this action involves an emergency regulation under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979). If it is determined that this emergency regulation otherwise would be significant under DOT Regulatory Policies and Procedures, a final regulatory evaluation will be prepared and placed in the Rules Docket. A copy of it, if filed, may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **Adoption of the Amendment**

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. Section 39.13 is amended by adding a new airworthiness directive to read as follows:

# AIRWORTHINESS DIRECTIVE

Aircraft Certification Service  
Washington, DC



U.S. Department  
of Transportation  
**Federal Aviation  
Administration**

*We post ADs on the internet at "av-info.faa.gov"*

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

**2000-23-52 SIKORSKY AIRCRAFT CORPORATION:** Amendment 39-12095. Docket No. 2000-SW-61-AD. Supersedes Emergency AD 2000-23-51, Docket No. 2000-SW-59-AD.

**Applicability:** Model S-76A, S-76B, and S-76C helicopters, with main rotor shaft assembly (shaft), part number (P/N) 76351-09030 series or 76351-09630 series, installed, certificated in any category.

**NOTE 1:** This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (f) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

**Compliance:** Required as indicated, unless accomplished previously.

To prevent failure of the shaft and subsequent loss of control of the helicopter, accomplish the following:

(a) Before further flight, perform a fluorescent penetrant inspection of the shaft in the area above the upper shaft output seal and below the lower hub attachment flange for any cracks in accordance with the Accomplishment Instructions, paragraphs 3.A.(1) through 3.A.(8), contained in Sikorsky Aircraft Corporation Alert Service Bulletin No. 76-66-31, Revision B, dated November 7, 2000 (ASB).

**NOTE 2:** The fluorescent penetrant inspection specified in this AD is not the fluorescent penetrant inspection contained in paragraph 4 of Chapter 20-05-00 of the applicable maintenance manual.

(b) Before the first flight of each day, visually inspect the shaft in the area above the upper shaft output seal and below the lower hub attachment flange for any cracks using a 10x or higher magnifying glass. Accomplish this inspection in accordance with the Accomplishment Instructions, paragraphs 3.B.(1) through 3.B.(5), of the ASB, except contacting Sikorsky Aircraft Corporation is not required by this AD.

(c) At intervals not to exceed 20 hours time-in-service or 80 landings, whichever occurs first, perform a fluorescent penetrant inspection of the shaft in the area above the upper shaft output seal and below the lower hub attachment flange in accordance with the Accomplishment Instructions, paragraphs 3.C.(1) through 3.C.(5), of the ASB, except contacting Sikorsky Aircraft Corporation is not required by this AD.

(d) If a crack is found as a result of any of the inspections, remove the shaft and replace it with an airworthy shaft that has been inspected in accordance with paragraph (a) of this AD before further flight.

(e) Before further flight, shafts, P/N 76351-09030-series, serial numbers with a prefix of "B" and numbers 015-00700 through 00706, must be removed from service.

(f) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Boston Aircraft Certification Office, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Boston Aircraft Certification Office.

**NOTE 3:** Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Boston Aircraft Certification Office.

(g) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the helicopter to a location where the requirements of this AD can be accomplished.

(h) The fluorescent penetrant and visual inspections shall be done in accordance with the Accomplishment Instructions, paragraphs 3.A.(1) through 3.A.(8), 3.B.(1) through 3.B.(5), and 3.C.(1) through 3.C.(5), contained in Sikorsky Aircraft Corporation Alert Service Bulletin No. 76-66-31, Revision B, dated November 7, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Sikorsky Aircraft Corporation, Attn: Manager, Commercial Tech Support, 6900 Main Street, Stratford, Connecticut 06614, phone (203) 386-7860, fax (203) 386-4703. Copies may be inspected at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(i) This amendment becomes effective on February 16, 2001, to all persons except those persons to whom it was made immediately effective by Emergency AD 2000-23-52, issued November 9, 2000, which contained the requirements of this amendment.

**FOR FURTHER INFORMATION CONTACT:** Wayne Gaulzetti, Aviation Safety Engineer, Boston Aircraft Certification Office, 12 New England Executive Park, Burlington, MA 01803, telephone (781) 238-7156, fax (781) 238-7199.

Issued in Fort Worth, Texas, on January 19, 2001.

Henry A. Armstrong, Manager, Rotorcraft Directorate, Aircraft Certification Service.